

Application for “Cross Dressing and Border Crossing” Workshop: April 2004, Vienna

Alistair MacDonald (Royal Scottish Academy of Music and Drama) and Sarah Rubidge (University College Chichester)

We, Alistair MacDonald and Sarah Rubidge, would like to participate in the “CrossDressing” workshop to be held in Vienna in 2004, by presenting some of the issues which arose during the creation of *Sensuous Geographies*, a multiuser interactive/responsive installation we create in 2003/4.

Sarah Rubidge (PhD) is a choreographer and digital installation artist. Most of her work has been developed in close collaboration with other artists and over the years has covered a variety of genres, from contemporary dance work, through music-theatre works, mixed media performance and large-scale digital installations. Much of her work is site specific. The focus of her artistic work now lies in the dialogue between dance and new technologies, in particular in interactive installation work. Some focus on audience-directed interactivity, some involve a performance element, some combine the two. At present she is particularly interested in developing installation spaces in which a sense of the environment is absorbed through the body, from the perspective of inhabitant of the environment rather than that of viewer. She is also interested in developing performative installation spaces in which the participants' movements become an integral element of the work itself. Her installation works include: *Passing Phases*, with Garry Hill, Tim Diggins and Nye Parry; *Halo*, with Simon Biggs and Stuart Jones; *Time & Tide* with Jane Rees; *Hidden Histories* with Joseph Hyde; *Sensuous Geographies (2003)* with Alistair MacDonald. In 2001 Sarah was awarded a three year Research Fellowship in the Creative and Performing Arts by the Arts and Humanities Research Board to pursue her work with interactive/responsive digital installations. She is currently Research Fellow at University College Chichester, where she teaches undergraduate and postgraduate courses in Performance and Technology and supervises practice-based PhDs. She also conducts international workshops in performance and technology. (www.sensedigital.co.uk).

Alistair MacDonald (PhD) is a composer of electroacoustic music. Based in Scotland, his work draws on a wide range of music which reflects a keen interest in improvisation and the human voice. Many of his works are made in collaboration with other artists from a range of media, and explore a range of contexts beyond the concert hall. His music has won a number of awards including, recently, a Creative Scotland Award, and is performed and broadcast in the UK and abroad. Several works are available on compact disc. Recent commissions include music for choreographer Anna Krzystek and clarsach player Catriona McKay. He also works with composer Jo Hyde and saxophonist Paul Dunmall in free improvisation involving live sampling, sound processing and mixing. He worked extensively with the electroacoustic ensemble BEAST producing and diffusing concerts, and was, for many years, on the board of Sonic Arts Network, the UK association for electroacoustic music. He teaches composition and regularly directs workshops in schools colleges and arts centres, and is Director of the Electroacoustic Studios at the Royal Scottish Academy of Music & Drama in Glasgow. (www.alistairmacdonald.co.uk)

Sensuous Geographies is an immersive multiuser interactive installation which has been designed to facilitate cooperative interactivity between participants. *Sensuous Geographies* is the result of an 18 month collaboration between choreographer Sarah Rubidge and composer Alistair MacDonald. Alistair has worked extensively with choreographers in the past, including Sarah, but not created an interactive musical environment prior to this project.

Several issues arose as we were developing this installation which we would like to air at the workshop. Within the context of the overarching desire to design an interactive/responsive multiuser interface which would facilitate cooperative interactivity amongst the participants, each of the artists had particular goals in mind which were influenced by their particular artistic backgrounds. Two central goals guided the choreographer as she worked. The first was to create

a multiuser interactive installation which would generate emergent choreographic forms during its use. The second was to develop an installation in which the behaviours of participants would be guided not through conscious intentions or thought ("If I go here this happens", "What would happen if I did this") but through 'unconscious' physiological messages initiated by subtle sensory perceptions of the environment. The composer's guiding intentions were less to do with the body and more to do with creating a complex musical environment, rather than an open-ended musical instrument, each manifestation of which would be brought to life and given a distinctive character by the activities of the participants.

These two sets of goals imply that the two artists were working towards providing the conditions to facilitate particular, but different, kinds of experience when they started work on the project. Although the two sets of goals remained distinctive throughout the development of the environment, they interpenetrated throughout the working process, modulating each other as they developed. The results was a work which had a richness of texture that perhaps would not have been generated had each artist focused on only their own set of goals

Sensuous Geographies itself is an interactive sound installation in which individual participants initiate and control strands of sound independently of each other, but in which the composite spatial behaviour of two, three or four of the participants (e.g the degree of proximity between participants a & b , or a & c, or d , b & a) also serves as a parameter for the modulation of the sound environment.

Sarah had explored the notion of multiuser installations in the past, but using visual imagery rather than sound as the primary interface (e.g. *Passing Phases: Halo*). She observed that in both, when these pieces were engaged with by the general public, the visual images seemed to encourage the viewer to use their minds, that is to let their conscious intentions guide their behaviour, rather than to use the *sense* the images generated in their bodies to initiate their responses. A further feature of both of these installations was that the tracking systems used did not individuate the participants. The latter were identified by the tracking system as one of many un-individuated 'objects' which changed location in the space. It could 'lose' the 'identity' of individual participants under certain circumstances (e.g. occlusion), and make an arbitrary decision as to the 'identity' of an object. In *Passing Phases*, if there were more than five or so people in the space, this meant that the participant did not have any idea which of the installation's responses they were initiating. In *Halo*, under these conditions the participants often lost control over the images they thought they were controlling. Rather, the figures appeared to the participants to be engaging in random behaviours which had little to do with the individual participant's behaviour.

Sensuous Geographies was in part intended to address both of the issues mentioned in the previous paragraph (legibility of the interface and the use of the sensory systems as the main interface with the environment). In order to overcome the tendency of visual images to activate the conscious intentions of the participants, and to redirect participants attention to bodily responses, it was decided to use spatialised sound as the main impetus for the navigation system in this project, on the grounds that sound has the capacity to affect the body at a deep physiological level, as well as to exercise the conscious mind. In order to address the issues concerning the need to individuate each participant, so as to increase the legibility of the interface, and thus facilitate co-operative interactivity, we needed to develop a multi-user interface which could track each participant independently, without losing 'sight' of them. This is a necessary condition for co-operative interactivity as it allows the participants to have some idea of the effect they are having on the environment, and thus of the general nature of their relationship to the installation, and to each other. It also allows for more sophisticated initiators of modulations to be used than one-one responsiveness (e.g. proximity between two or more people X & Y affecting the sound environment in one way, proximity between a different grouping of people, X/Y/Z, affecting the sound environment in another way.)

Alistair designed and built the interactive system which drove the work (using Max/MSP), and, over time, created the musical environment which participants generated as they engaged with the installation. However, the particularity of both the installation environment and the interactive interface, and the nature of the participants' interactive engagement with that interface were developed in conjunction with the choreographic needs Sarah brought to the installation. These included the desire to have the participants be guided by the *sense* the sound environment generated in their bodies (for example the sound is such that you "lean" into it and let that physical response move you in a particular direction, and at a particular speed), and the desire to see a genuinely emergent choreographic form develop as individual participants followed their sounds around ('their' sound tracked them around the space), or luxuriated in the particular sound environment they were generating. In order to encourage participants to really engage in their sensory responses to the environment they were blindfolded as they entered the active space. This required that they attend to those details of the environment of which they may not be aware when able to see the space around them (e.g the precise placement of the sounds in the space in relation to their own body, the feeling the sound generated in their bodies, the actions that feeling precipitated, and the proximity of sounds other than their own to their own location).

The design of the interface used choreographic understandings concerning the use of space as a means of rationalising some of the parameters for modulating the sound (e.g. proxemics as a means of creating dynamic, fluid group formations, the sound tracking the location of the participant in space). This facilitated the development of emergent choreographic (spatial) forms as the participants interacted with the environment. We noticed that different participants responded in different ways. Musicians and composers would often try to create a musical event as they engaged with the environment. Others would simply explore and savour the sound world they found themselves creating. Some would combine the two. There was room for all these responses, and more, in the environment. Equally there was room for 'novice' responses and more 'expert' responses. What became apparent was that the more time participants spent in the installation the more sophisticated their responses became (participants tended to return to the installation several times within a single visit and some came on more one evening). The manipulation of the environment became more expert both with respect to the individual as individual and as a member of a group, and the texture of the environment being produced concomitantly more complex. This was in part due to the richness of the sound environments the participants found themselves initiating. In the final analysis the interface of *Sensuous Geographies* proved to be accessible to, and usable by, both experts and novices alike, and generated a wide variety of coherent interactive group responses from participants.

The methodology used during this project comprised a cyclical flow between a) long discussions concerning the generalised effects we wished to achieve, both from the perspective of the musical interface and the behaviour of the participants who generated the musical event, b) building the interface in the software, c) mounting the sound installation in situ, and testing the efficacy of the tracking system (video camera and colour recognition software), the legibility of the interface, the effect of the interface and sound environment on participants, and their effect on the installation, d) evaluating the responses of both the interface and the participants and reconsidering the effects we wanted to achieve in the light of this. This cycle was undertaken three times prior to the final performance. On each occasion the interface and musical content were refined and developed. The piece was mounted for the first time in February 2003. The responses to this were used to further modify the interface and environment for future events.

At the time we commenced the project the only affordable tracking system we could access used video camera and colour recognition. The limitations imposed by this system significantly affected the visual appearance of the installation environment. With this type of tracking system participants exploring an installation intended to be used by the public have to be identified by particular colours, namely bright red, yellow, green and blue. In order to facilitate this we decided that participants would be dressed in costumes before entering the active space, rather than putting on hats, or using umbrellas. This led to the very particular visual ambience of this installation. We commissioned a costume designer to create costumes which could be worn by

people of any size and of any gender. She created a set of costumes for both novices and expert users which ultimately provided the installation its visual character. As can be seen from the accompanying photographs, the costumes are opulent, richly coloured, and quite out of character in a technological world. The costumes also proved to have another function. They served as masks, which gave participants the freedom to behave in a way they would not have behaved had they been in everyday clothes. The donning of the costumes also served as a threshold between the everyday world and the world of the installation, inasmuch as the process of putting on a costume, and facial mask, gave the event in which they were involved a sense of ritual.

An interesting offshoot of the installation also occurred, and later taken up by Dr Chris Creed, a social psychologist from Portsmouth University. Chris attended the first showing of *Sensuous Geographies* in Glasgow. In addition to his own personal experience of the installation, he noted that the installation had encouraged a level of social engagement both inside and outside of the installation environment that was unusual amongst strangers. The installation tended to make people want to work together in the installation and, after they had emerged from, it to talk with each other about the nature of their personal experiences within the installation. These conversations often led to people going back into the installation together to explore new ways of responding to the space. Some participants came back on succeeding days to re-experience the installation. Other participants found that the physiological, and psychological, effects engendered by the installation lasted well into the next day, modifying their ways of being in the world outside to an extent neither they, nor we, had expected. We are hoping that this aspect of the installation will be researched further in 2004.

Sarah Rubidge
Alistair MacDonald
January 16th 2004